



RE: data that makes case TMDL is only needed in Hackensack and Passaic Rivers
Miller, Robin
to:
Rosella OConnor
01/27/2012 05:21 PM
Hide Details
From: "Miller, Robin" <Robin.Miller@hdrinc.com>

To: Rosella OConnor/R2/USEPA/US@EPA

History: This message has been forwarded.

1 Attachment



image001.png

Explanation of the suggested approach.

When we get to the point of running the model with a modified head-of-tide load for the Passaic and Saddle Rivers, it would be foolish to run for all thirteen simulation years for testing. Since we know that the 2000 and 2003 years bracket the 1 in 3 year return frequency, we should run those two years first and examine the outputs. If it looks like these are the final results that we will use in terms of the loading reductions (10% SW, 87% Passaic CSO, and 70% Hackensack CSO, with modified head-of-tide), we can go ahead and run the remaining 11 years needed for a full thirteen year simulation. The thirteen year results would then be verified for compliance and we are done. If it doesn't look like the loading reductions are the final ones based on 2000 and 2003, say maybe we want to try and backdown the 87% Passaic CSO reduction, for example, then we would re-run the 2000 and 2003 years again to test new reductions. The full thirteen years would be run using the final inputs selected.

Stated another way, it isn't a good use of schedule or budget to keep running all 13 years for each test of input changes. For input change testing purposes, we can run with the two years we believe govern the 1 in 3 year exceedance (2000 and 2003). When we get to the final run, we run for all 13 years so we have the proof/verification of meeting the standard.

ROBIN LANDECK MILLER

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From: Rosella OConnor [<mailto:OConnor.Rosella@epamail.epa.gov>]
Sent: Friday, January 27, 2012 4:14 PM
To: Miller, Robin
Cc: Felix Locicero
Subject: Re: data that makes case TMDL is only needed in Hackensack and Passaic Rivers

Thanks Robin, I'll take a look at the info. I just spoke to Jeff and Barbara (separately) and their preference is to include you on the call on **Wed Feb 1 at 1 PM**. I'll talk to Felix on Monday and make sure he's in agreement. I also spoke to Barbara about how data were used to determine that only the Hackensack and Passaic exceed standards and she is now comfortable with that approach.

So, basically, we are down to the boundary condition issue for our discussion on Wed. I think she's in agreement that we should not wait for the Stevens work on the Upper Passaic to be completed to establish the boundary condition. However, she is confused about this item in your list of tasks (not sure I understand it either).

Report Hackensack and Passaic seasonal geo mean Enterococci outputs in every grid cell for 1 in 3 year return frequency.
 If EPA/State likes compliance results, run for the additional 11 years.
 If non-compliance of if EPA/State doesn't like compliance results, re-run 2000 and 2003 with a different Passaic CSO reduction, check output, and then run for the additional 11 years.".

These are Barbara's questions: What does it mean "if EPA/State likes compliance results, run for the additional 11 years"? Why are we running the model for 11 years, if we decided on a 1 in 3 year frequency? Why would we re-run 2000 and 2003? If you can explain this via e-mail, perhaps we don't need to talk about it on Wed.

Thanks,
 Rosella

From: "Miller, Robin" <Robin.Miller@hdrinc.com>
 To: Rosella OConnor/R2/USEPA/US@EPA
 Date: 01/27/2012 03:52 PM
 Subject: data that makes case TMDL is only needed in Hackensack and Passaic Rivers

Rosella:

This is the data (not model results) that was the basis for determining TMDLs are needed in Hackensack and Passaic not other Harbor areas. As I mentioned, on the call the modeling was not the basis of selecting the waters so we do not need to revisit specification of head-of-tide modeling in other areas.

This section addresses the attainment of primary contact recreation criteria based on the States Interpretation of the Beach Act. In this case, the criteria are based on a seasonal enterococci geometric mean concentration of 35 No./100mL. The assessment is based on recent water quality data (2008 – 2009)

and model results that represent a three year return period.

Data Analysis

Data collected in 2008 and 2009 were evaluated for compliance of primary contact recreation. The basis for this analysis is the New York City Harbor Survey (NYHS) data and the New Jersey Harbor Discharge Group (NJHDG) Survey data. Both these groups survey their respective stations approximately once per week during the summer period. The station locations for these surveys are shown on Figures 3 and 4.

The geometric mean concentrations for enterococci were calculated for both the NYHS data and the NJHDG data. These results are shown on Tables 7 and 8.

This analysis focuses on the open waters of the harbor. The tributaries in New York (i.e. Gowanus Canal, Bronx River, etc) are not considered part of the study. Likewise, the Saddle River, Second River, tributaries to the Passaic River, Berrys Creek tributary to the Hackensack River, and the Rahway River are not considered part of this analysis.

The results indicate that for the open waters that there is a slight non-attainment in the Harlem River using the NYHS data and there is observed non-attainment in the Passaic River and Hackensack River using the NJHDG data

**Table 7. Statistical Characteristics of NYHS 2008 – 2009
Enterococci Data**

| Station ID | Station Location | Standard | Seasonal Geo Mean | Compliance with Primary Contact |
|------------|--------------------|----------|----------------------|------------------------------------|
| K01 | The Kills | 35 | 6 | Y |
| K02 | The Kills | 35 | 5 | Y |
| K03 | The Kills | 35 | 6 | Y |
| K04 | The Kills | 35 | 4 | Y |
| K05 | The Kills | 35 | 3 | Y |
| K05A | Raritan Bay | 35 | 3 | Y |
| E14 | East River | 35 | 6 | Y |
| E02 | East River | 35 | 5 | Y |
| E04 | East River | 35 | 6 | Y |
| E06 | East River | 35 | 6 | Y |
| E07 | East River | 35 | 4 | Y |
| E08 | East River | 35 | 3 | Y |
| E10 | East River | 35 | 2 | Y |
| N01 | Hudson River | 35 | 4 | Y |
| N03B | Hudson River | 35 | 7 | Y |
| N04 | Hudson River | 35 | 7 | Y |
| N05 | Hudson River | 35 | 4 | Y |
| N06 | Upper New York Bay | 35 | 5 | Y |
| N07 | Upper New York Bay | 35 | 4 | Y |
| N08 | Lower New York Bay | 35 | 3 | Y |
| N09 | Lower New York Bay | 35 | 2 | Y |
| K06 | Raritan Bay | 35 | 2 | Y |
| H01 | Harlem River | 35 | 36 | N |
| H02 | Harlem River | 35 | 5 | Y |

**Table 8. Statistical Characteristics of NJHDG 2008 – 2009
Enterococcus Data**

| Seasonal Geometric Mean Geo Mean | Station ID | Station Location | Standard | Seasonal Standards | Compliance with Recreational |
|-------------------------------------|------------|----------------------|----------|--------------------|------------------------------|
| 1 | | Passaic/Totowa Ave. | FW2(1) | 39 | NA(3) |
| 2 | | Passaic/Northwest St | FW2 | 104 | NA |
| 3 | | Passaic/Lincoln Ave. | FW2 | 79 | NA |

| | | | | |
|----|-----------------------|-----|-----|----|
| 4 | Passaic/Market St. | FW2 | 33 | NA |
| 5 | Passaic/Dundee Dam | FW2 | 56 | NA |
| 6 | Saddle River | 35 | 375 | N |
| 7 | Passaic/Union Ave. | 35 | 83 | N |
| 8 | Passaic/Rutgers St. | 35 | 111 | N |
| 9 | Second River | 35 | 821 | N |
| 10 | Passaic/Clay St. | 35 | 94 | N |
| 11 | Passaic/Jackson St. | 35 | 76 | N |
| 12 | Passaic/Kearney Pt. | 35 | 13 | Y |
| 13 | Hackensack/Oradell D | 35 | 15 | Y |
| 14 | Hackensack/Berrys C | 35 | 140 | N |
| 15 | Hackensack/Marion | 35 | 40 | N |
| 16 | Hackensack/Mouth | 35 | 16 | Y |
| 17 | Newark/Upper | 35 | 7 | Y |
| 18 | Newark/Lower | 35 | 4 | Y |
| 19 | Newark/Shooters Is. | 35 | 4 | Y |
| 20 | Elizabeth | FW2 | 480 | NA |
| 21 | Arthur Kill/Elizabeth | 35 | 12 | Y |
| 22 | Rahway | 35 | 244 | N |
| 23 | Arthur Kill/Rahway | 35 | 7 | Y |
| 24 | Arthur Kill/Reading | 35 | 5 | Y |
| 25 | Raritan/Upstream | FW2 | 245 | NA |
| 26 | Raritan/Basilone Br. | FW2 | 48 | NA |
| 27 | Raritan/Wash. Canal | FW2 | 34 | NA |
| 28 | Raritan Bay/West | 35 | 6 | Y |
| 29 | Raritan Bay/Central | 35 | 2 | Y |
| 30 | Raritan Bay/Crookes P | 35 | 2 | Y |
| 31 | Hudson/GW Bridge | 35 | 3 | Y |
| 32 | Hudson/Lincoln T | 35 | 3 | Y |
| 33 | Hudson/Holland T | 35 | 4 | Y |

| | |
|-----------------------------|---|
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